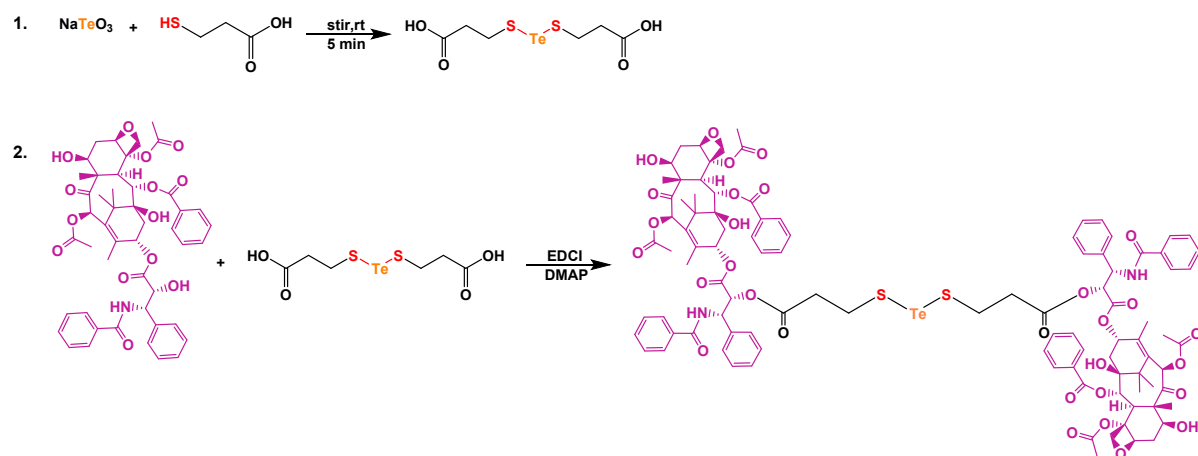


Supporting Information

1. Supplementary Figures



Scheme S1. Synthesis process of Synthesis of 3,3'-(telluriumdithio)-dipropionic acid and PTX₂-STeS.

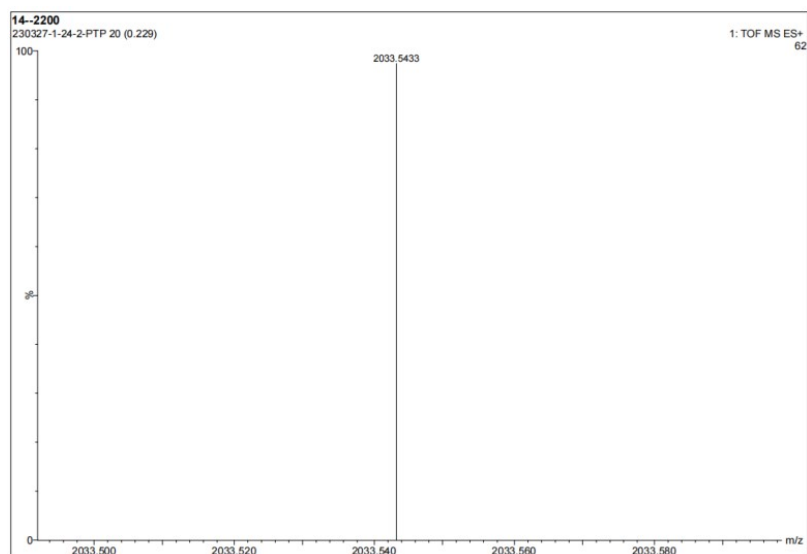


Figure S1. HR-MS spectrum of PTX₂-STeS.

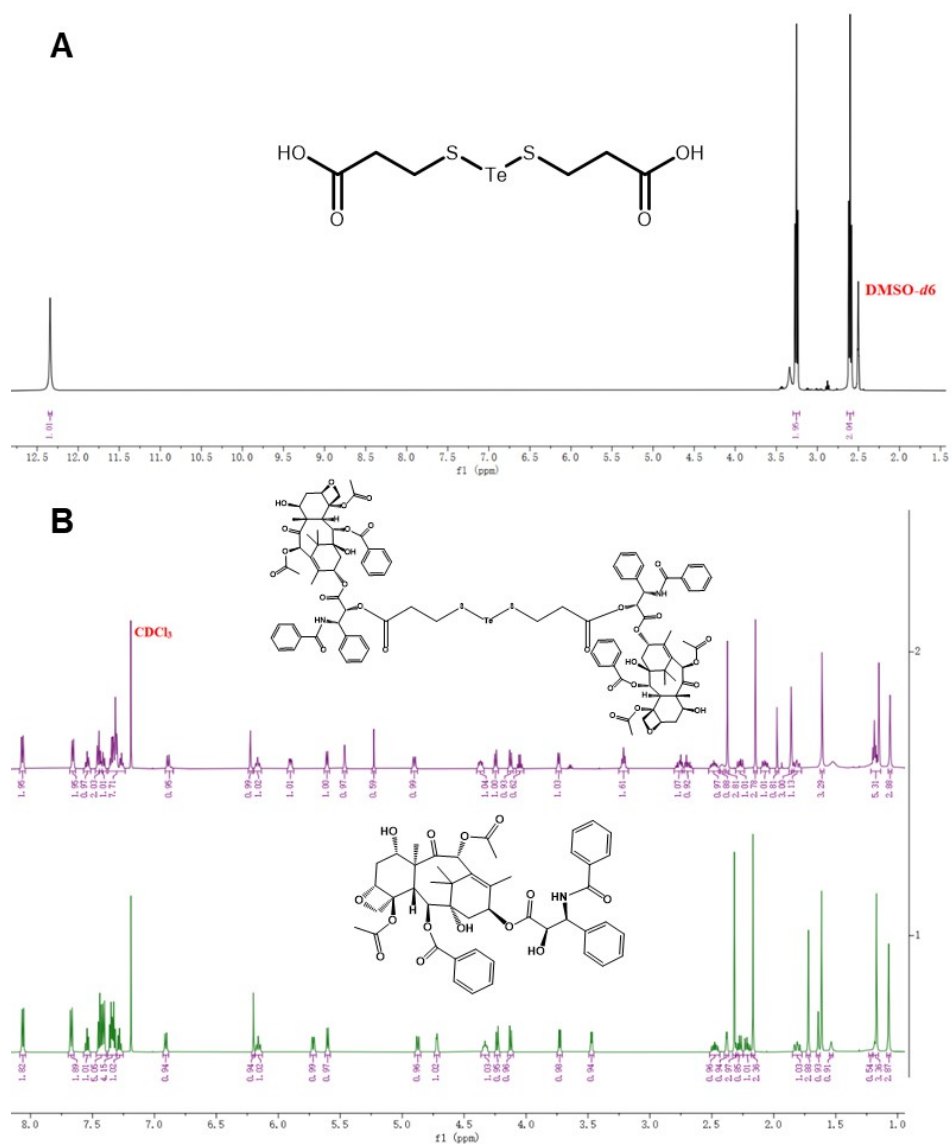


Figure S2. A) ¹H-NMR spectrum of 3, 3'-(telluriumdithio)-dipropionic acid and **B)** PTX₂-STeS.

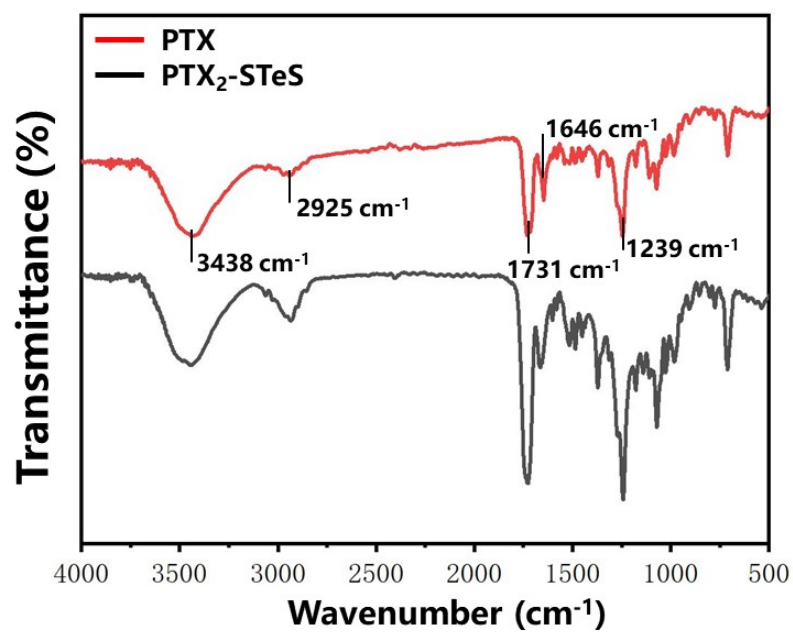


Figure S3. FT-IR spectrum of PTX and PTX₂-SteS.

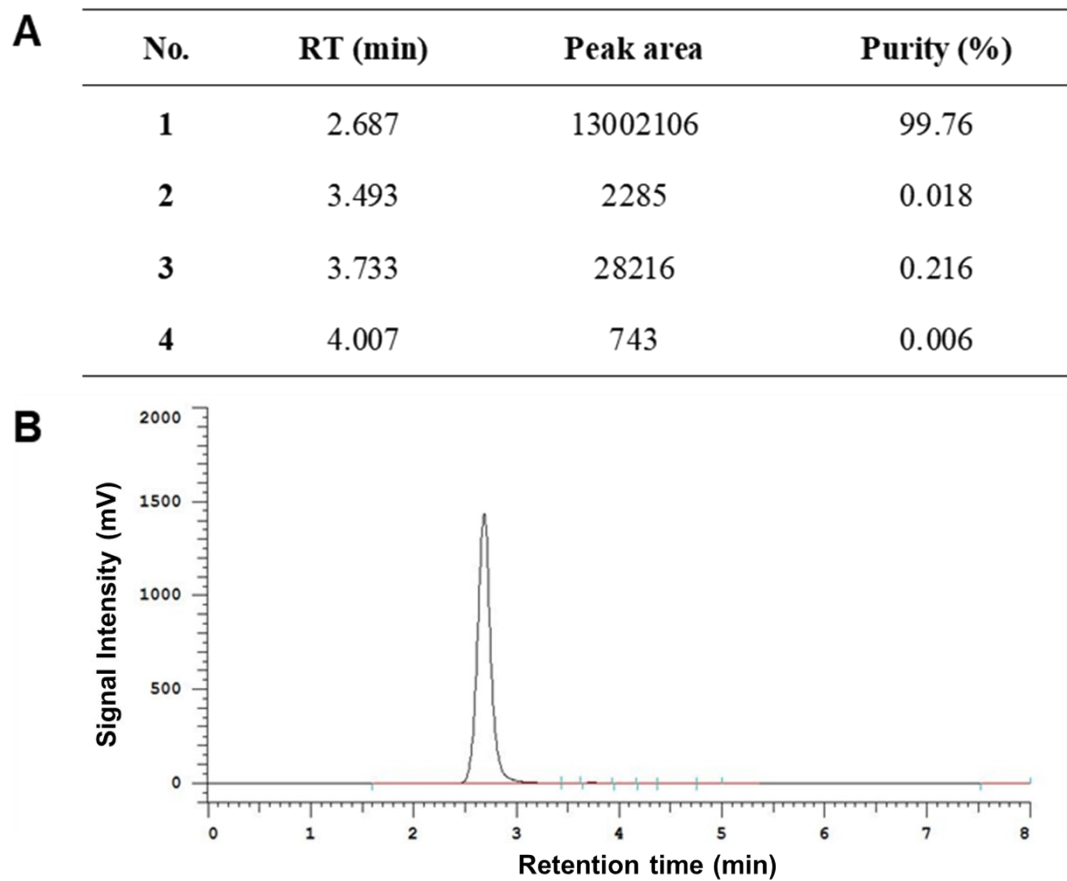


Figure S4. A) HPLC purity report of PTX₂-STeS; B) HPLC chromatogram of PTX₂-STeS.

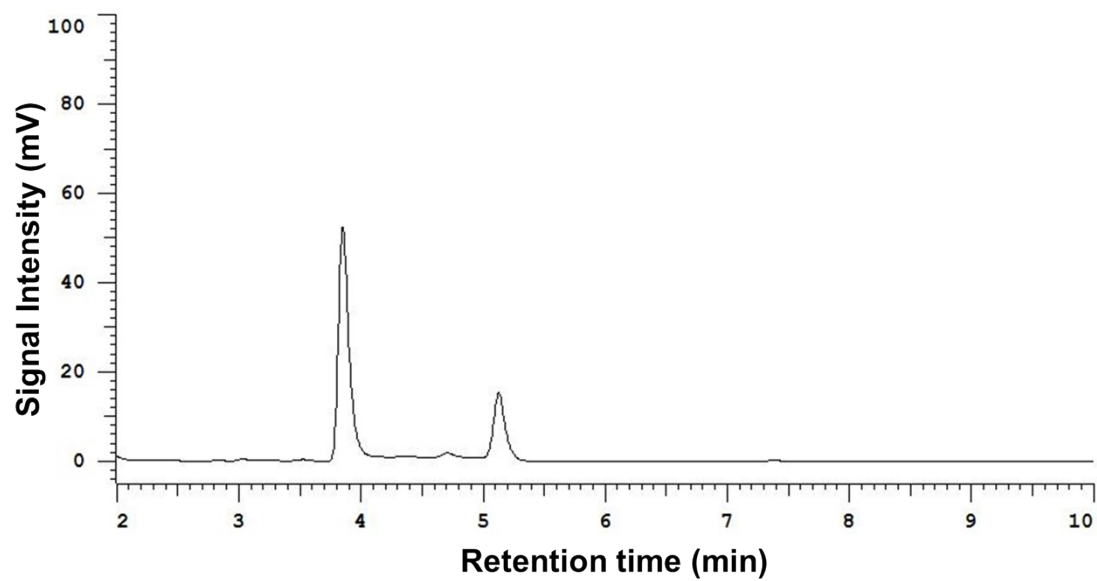


Figure S5. HPLC chromatogram of DHA.

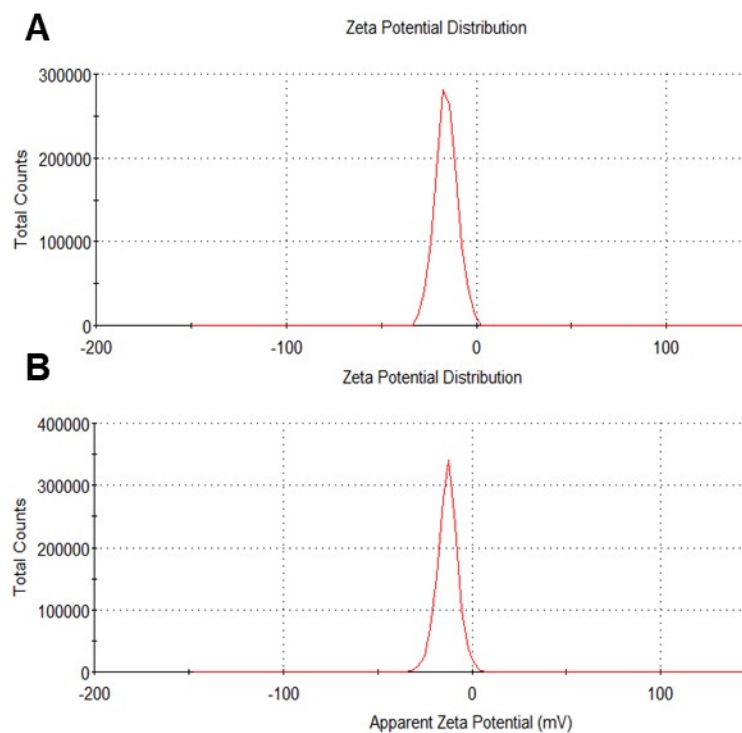


Figure S6. A) Zeta potential of PTP NPs and **B)** DPTP NPs.

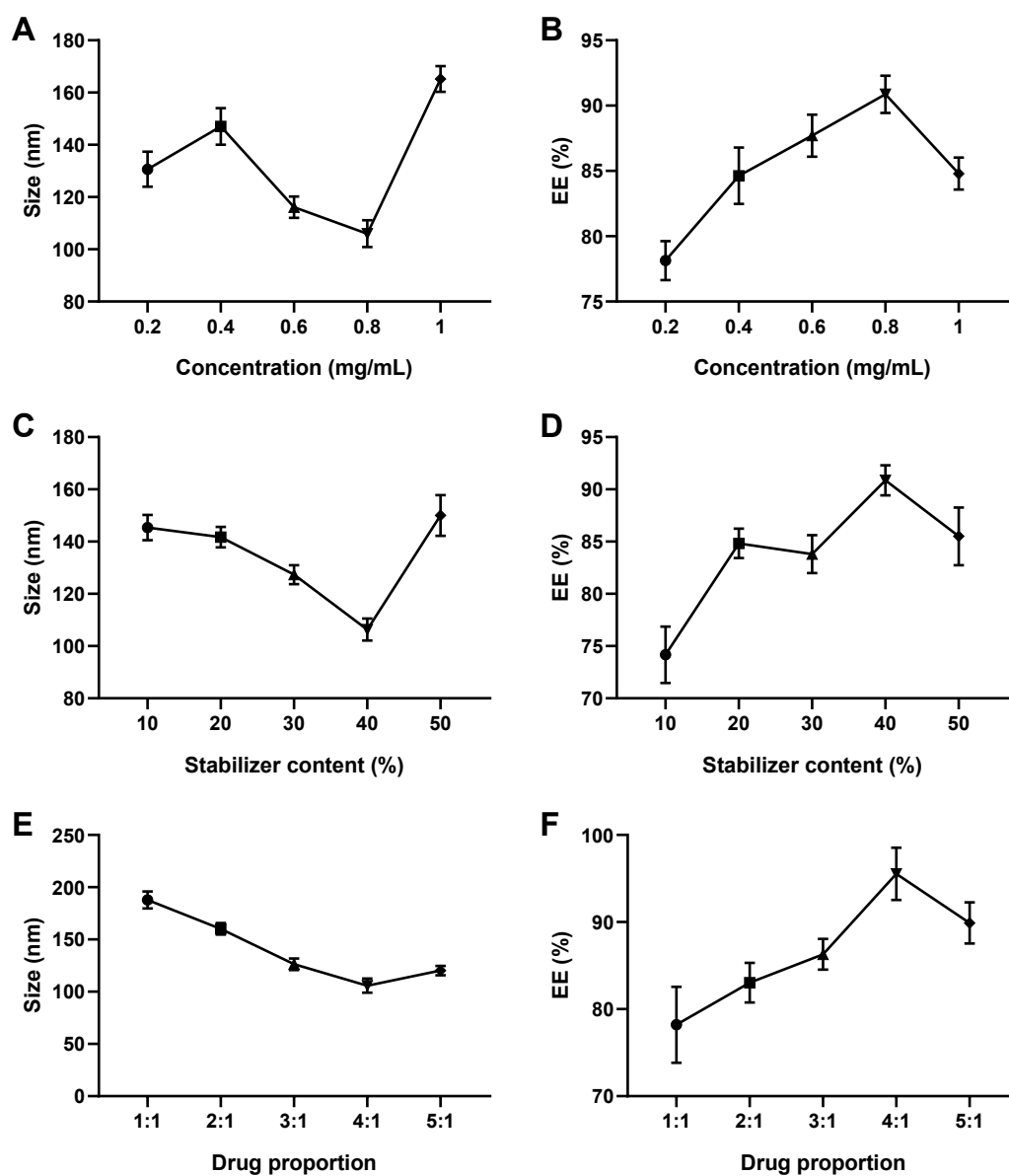


Figure S7. Single factor-screening for prescription optimization based on particle size and encapsulation efficiency. Concentration (A), stabilizer content (B) and drug proportion (C) are respectively set as the single factor variable. Data are presented as mean $\pm$ SD, $n = 3$.

2. Supplementary Tables

Table S1. The factors and levels of response surface design.

Factors	Levels		
	-1	0	1
A: Concentration (mg/mL)	0.6	0.8	1
B: Stabilizer content (%)	30	40	50
C: Stirring speed (r/min)	800	1000	1200
D:Temperature (°C)	25	31	37

Table S2. The size, PDI, Zeta potential, EE and DL of PTP NPs and DPTP NPs.

Preparations	Size (nm)	PDI	Zeta (mV)	EE (%)	DL (%)
PTP NPs	92.4±1.10	0.18±0.02	-15.8±0.83	90.8±1.40	55.9±0.18
DPTP NPs	100.1±1.30	0.13±0.05	-13.3±0.40	92.7±1.20	44.4±0.20
				87.1±1.70	10.4±0.24